



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09:922,482	08-03/2001	Mehyar Khazai	PA990210U1	7220

23696 7590 01/21/2004

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

PATEL, PARESH H

ART UNIT	PAPER NUMBER
----------	--------------

2829

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,482

Applicant(s)

KHAZEI, MEHYAR

Examiner

Paresh Patel

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 86-107 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 86-107 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant has cancelled claims 1-85 (including the rejection of elected claims 1-6, 12-13, 62-64 and 67-68) of the last office action. Claims 86-107 have been added.

Applicant's arguments with respect to newly added claims 86-107 have been considered but are moot in view of the new ground(s) of rejection.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "System method, and apparatus for field scanning of magnetic field radiated by the IC".

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 87-89 and 98-100 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably

Art Unit: 2829

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 87 and 98, it is not clear how transfer function was produced or obtain from the paragraph 144 of the disclosure, it is also not clear how transfer function was created or produce or obtain for the sensor from the paragraph 152 and 183 of the disclosure and also it is not clear what generates (e.g. means or device) this transfer function.

Dependent claims are also rejected because they depend from rejected claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 86, 90-95, 97 and 101-106 are rejected under 35 U.S.C. 102(b) as being anticipated by Eriksson et al. (US 5844414).

Regarding claims 86 and 97(new), Eriksson et al. (hereafter Eriksson) in fig. 1 discloses a near field scanner including a rotating sensor [4, 30], comprising: means [2, 6, 18], coupled to the rotating sensor, for conducting near field measurements along multiple positions and multiple planes [using 8] relative to an integrated circuit (IC) [test object 12] to obtain magnitude and direction of magnetic field radiated by the IC [lines

30-33 of column 3 and lines 50-59 of column 4]; and means [2, 18 and lines 48-59 of column 4] for creating a corresponding current map using the near field measurements.

Regarding claims 90 and 101(new), Eriksson discloses a tuned receiver [2].

Regarding claims 91 and 102(new), Eriksson discloses the means [20 with 2 and 18] using the near field measurement to display a representation of the magnetic field, the representation characterized by at least one of the IC and an outline of the IC in tandem with the representation of the magnetic field.

Regarding claims 92 and 103(new), Eriksson discloses the means for conducting near field measurement includes means [18] for inputting an excitation signal to the IC, the magnetic field being based in part on excitation signal parameters derived from the excitation signal.

Regarding claims 93 and 104(new), Eriksson discloses the means for inputting excitation signal parameters include means [18] for controlling at least one of the frequency and the amplitude of the excitation signal.

Regarding claims 94 and 105(new), Eriksson discloses the rotating sensor rotates about an axis perpendicular to a surface of the IC [see position of 12 and 4 in fig. 1].

Regarding claims 95 and 106(new), Eriksson discloses the rotating sensor includes a recognition mechanism [recognizing is inherent to 4 because computer 18 controls its position w.r.t. 12] the for determining a relative direction of the rotating sensor with respect to the IC.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 87-88, 98 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson as applied to claims 86 and 97 above, and further in view of Todter et al. (US 5937070).

Regarding claims 87 and 98 (new), Eriksson discloses all the elements except for means for conducting near field measurements involves **applying a transfer function to a signal** received from the rotating sensor. However, Eriksson eliminates the effect (e.g. noise or interference etc.) of control electronics (due to voltage application) on the measurement of field [see step 3 of fig. 7 (Turn off control electronics) and lines 16-22 of column 4]. Todter et al. (hereafter Todter) in fig. 5-6 discloses a means [compensation circuitry, see lines 17-29 of column 3] for applying a transfer function to a signal to cancel the noise. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the means (for conducting near field measurements involves) of Eriksson with compensation circuitry of Todter, so desired output signal can be obtain by reducing or canceling noise component as taught by Todter.

Regarding claims 88 and 99 (new), Todter discloses the transfer function is a function of frequency [lines 59-64 of column 12].

Art Unit: 2829

Claims 89 and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson and Todter as applied to claims 86-88 and 97-99 above, and further in view of Kondraske (US 4873655).

Regarding claims 89 and 100 (new), Eriksson and Todter discloses all the elements except for means for calibrating the sensor using a reference field source to obtain the transfer function of the rotating sensor. Kondraske discloses means for calibrating the sensor using a reference field source to obtain the transfer function of the rotating sensor [Abstract]. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Eriksson and Todter with apparatus as taught by Kondraske, so desired transfer function of the sensor can be conform with calibration and conditioning sensor output.

Claims 96 and 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson as applied to claims 86 and 97 above, and further in view of May et al. (US 6346812).

Regarding claims 96 and 107, Eriksson discloses all the elements except for the rotating sensor include a conditioning circuit for conditioning signals generated by the rotating sensor. May et al. (hereafter May) in fig. 1-2 discloses the rotating sensor includes a conditioning circuit [fig. 1 or 2] for conditioning signals generated by the rotating sensor. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to include the conditioning circuit as taught by May to modify the sensor of Eriksson, in order to recognize unbalanced current (signal) in the

Art Unit: 2829

sensor due to external field (magnetic field) can be used directly as a measurement parameter, thereby avoiding the need to generate the nulling or compensating current (signal) of the prior art [see lines 35-41 of column 2].

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

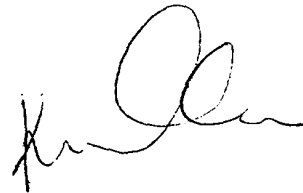
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paresh Patel whose telephone number is 703-306-5859. The examiner can normally be reached on 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 703-308-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Paresh Patel
Jan. 09, 2003

A handwritten signature in black ink, appearing to read 'Paresh Patel', located to the right of the typed name and date.